M/053/005

Permit No.: UGW230001

STATE OF UTAH
DIVISION OF WATER QUALITY
DEPARTMENT OF ENVIRONMENTAL QUALITY
P.O. BOX - 16690
SALT LAKE CITY, UTAH 84116-0690

Ground Water Quality Discharge Permit

In compliance with the provisions of the Utah Water Pollution Control Act, Title 19, Chapter 5, Utah Code Annotated 1953, as amended,

USMX of Utah
Goldstrike Mine
P.O. Box 2650
St. George, Utah 84770

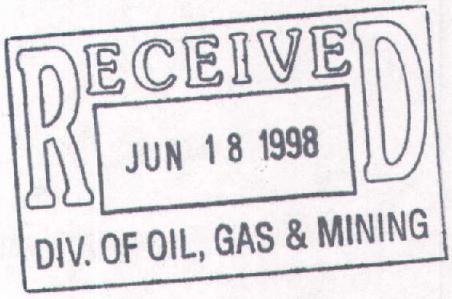
is granted a Ground Water Quality Discharge Permit for the Goldstrike Mine Heap Leach Facilities located from latitude 37° 22' 15" to° 37 23' 30" North, and from longitude 113 52' 30"to 113° 55' 45" West in accordance with conditions set forth herein.

This Ground Water Quality Discharge Permit supersedes all other Ground Water Discharge permits for this facility issued previously.

This permit shall become effective on June 15, 1998

This permit and the authorization to operate shall expire at midnight June 15, 2003

Executive Secretary
Water Quality Board



2. Compliance Determination Method - Compliance with ground water protection levels shall be demonstrated by data from four compliance monitoring wells in accordance with the procedures specified in Paragraph E. If future monitoring data indicates an exceedance of protection levels, compliance status will be determined in accordance with R317-6.6.17 including if necessary reference to methods described in the EPA Interim Final Guidance Documents entitled "Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities", dated February, 1989 and the July 1992 draft addendum to the Interim Final Guidance. Subsequent updates of this document shall be utilized as available and appropriate.

D. Post Operation Discharge Minimization Technology

1. Facility Design Standard- The initial operating facility was designed and constructed during its operating period according to the plans and specifications approved in Contruction Permits approved in Nov. 3, 1988, Feb. 26, 1990, and May 1, 1990. Subsequent to the termination of operation, the heap leach pads are being closed with a vegatative cover. The cover will consist of graded and compacted subore and six to eight inches of top soil. The top soil will be seeded in accordance with Division of Oil Gas and Mining (DOGM) reclamation requirements. At a minimum vegetation must be established to a density consistent with DOGM requirements.

2. Technology Performance Standard- The general standard to be achieved in previously administered groundwater discharge permits and future post operational permits is the prevention of any migration of wastewater in a quantity that would cause concentrations in the aquifer to exceed levels for the established beneficial use of the aquifer. Numerically this will be shown by:

   a. No detection of process fluids in leak detection heap leach pad sumps

   b. Flow rate for leakage into pond sumps shall not exceed 200 gallons per acre per day.

3. Closure Plan - The Closure Plan required to be submitted under Part I.H.1 will become encorporated by refrence upon approval by the Executive Secretary.

E. Compliance Monitoring Requirements

1. Protection Level Point of Compliance - The permittee will continue to

i) Are methods cited in UAC R317-6-6.3A(13), and

ii) Have detection limits which are less than or equal to the minimum detection levels found in Part I C, Table I.

d) Analysis Parameters - the following analyses will be conducted on all ground water samples collected:

i) Field Parameters - pH, temperature, and specific conductance.

ii) Laboratory Parameters - including:

- Major Anions and Cations: including chloride, sulfate, carbonate, bicarbonate, sodium, potassium, magnesium and calcium.
- Protection Level Parameters - found in Table 1 of Part I C, above.
- Weak Acid Dissociable Cyanide
- Cyanide Amenable to Chlorination
- Cyanide Degradation Products, including: ammonia and nitrite.

3. Discharge Minimization Performance Standard Monitoring - During the period beginning with the effective date of the permit and lasting the term of the permit or as stated in an approved closure plan, the permittee shall demonstrate compliance with the perfomance standard for the pads and ponds.

a. Procedures for pads.

(1) frequency - slotted HDPE 1 1/2-inch leak detection pipes of all pads shall be visually monitored daily during operation for the presence of fluids, and the results recorded in a log maintained by the operator. The leak detection sumps are located along the solutions margin of each leach pad.

(2) sampling - upon detection of fluids in the sumps, samples will be immediately analyzed for the following constituents: pH; Cyanide (total, WAD and free), Arsenic, TDS, and Nitrate-Nitrite.

(4) reporting leakage of 490,000 gallon fresh water pond -

(a) record volumes removed
(b) report above results quarterly.

F. Non-Compliance Status

1. Probable Out-of-Compliance Based on Exceedance of Ground Water Protection Limits

The permittee shall evaluate the results of each round of ground water sampling and analysis to determine any exceedance of the ground water protection levels found in Table 1 . Upon determination by the permittee that the data indicate a ground water protection level may have been exceeded at any downgradient compliance monitoring well, the permittee shall:

a) Immediately resample the monitoring well(s) found to be in probable out-of-compliance, for the protection level parameters that have been exceeded. Submit the analytical results thereof, and notify the Executive Secretary of the probable out-of-compliance status within 30 days of the initial detection.

b) Immediately implement an accelerated schedule of monthly ground water sampling and analysis, consistent with the requirements of Part I.E.2. This monthly sampling will continue for at least two months or until the compliance status can be determined by the Executive Secretary. Reports of the results of this sampling will be submitted to the Executive Secretary as soon as they are available, but not later than 30 days from each date of sampling.

2. Out-of-Compliance Status Based on Confirmed Exceedance of Permit Ground Water Protection Limits

a) Out of Compliance Status shall be defined as follows:

1) Out-of-compliance shall be defined as 2 consecutive samples from a compliance monitoring point exceeding the established protection level.

non-compliance with this permit provision by satisfactorily demonstrating the provisions of UAC R317-6-6.16C.2.

G. Reporting Requirements

1. Discharge Minimization Technology and Ground Water Monitoring Report:

a) Schedule - The sampling and analysis required in Part I.E., above, shall be reported according to Table 2, below.

Table 2 - Compliance Monitoring Reporting Schedule

Quarter		Report Due On
1st	(Jan., Feb., March)	April 15
2nd	(April, May, June)	July 15
3rd	(July, Aug., Sept.)	October 15
4th	(Oct., Nov., Dec.)	January 15

b). Sampling and Analysis Report - will include:

1) Field Data Sheets - or copies thereof, including the field measurements, required in Part I C 1(c)(1), above, and other pertinent field data, such as: sample location, date and time, names of sampling crew, type of sampling pump or bail, measured casing volume, volume of water purged before sampling.

2) Results of Sample Analysis - including date sampled, date received, ion balance; and the results of analysis for each parameter, including: value or concentration, units of measurement, reporting limit (minimum detection limit for the examination), analytical method, and the date of the analysis.

3) Electronic Filing Requirements - In addition to submittal of the hard copy data, above, the permittee will be required to electronically submit the required ground water monitoring data in an electronic format and at a date established by the Executive Secretary. The data may be sent by e-mail, floppy disc, modem or other approved transmittal mechanism.

II. MONITORING, RECORDING AND REPORTING REQUIREMENTS

A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under Part I shall be representative of the monitored activity.

B. Analytical Procedures. Water sample analysis must be conducted according to test procedures specified under UAC R317-6.3.A.13, unless other test procedures have been specified in this permit.

C. Penalties for Tampering. The Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

D. Reporting of Monitoring Results. Monitoring results obtained during each reporting period specified in the permit, shall be submitted to the Executive Secretary, Utah Division of Water Quality at the following address no later than the 15th day of the month following the completed reporting period:

State of Utah
Division of Water Quality
Department of Environmental Quality
Salt Lake City, Utah 84114-4810
Attention: Ground Water Protection Section

E. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Additional Monitoring by the Permittee. If the permittee monitors any pollutant more frequently than required by this permit, using approved test procedures as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted. Such increased frequency shall also be indicated.

G. Records Contents. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements:
2. The individual(s) who performed the sampling or measurements;
3. The date(s) and time(s) analyses were performed;
4. The individual(s) who performed the analyses;

J. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours, shall be reported at the time that monitoring reports for Part II D are submitted.

III. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Executive Secretary of the Utah Water Quality Board of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

B. Penalties for Violations of Permit Conditions. The Act provides that any person who violates a permit condition implementing provisions of the Act is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions is subject to a fine not exceeding $25,000 per day of violation. Any person convicted under Section 19-5-115(2) of the Act a second time shall be punished by a fine not exceeding $50,000 per day. Nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

IV. GENERAL REQUIREMENTS

A. Planned Changes. The permittee shall give notice to the Executive Secretary as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required when the alteration or addition could significantly change the nature of the facility or increase the quantity of pollutants discharged.

B. Anticipated Noncompliance. The permittee shall give advance notice of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

C. Spill Reporting - The Permittee shall immediately report as per UCA 19-5-114 of the Utah Water Quality Act any spill or leakage from the tailings impoundment or associated facilities which is not totally contained by a collection system. This report shall be made to the phone numbers given in Part II I 1. A written report will be required within 5 days of the occurrence and should address the requirements of UCA 19-5-114 and Part II I 2 and 3 of this permit.

D. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

E. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a permit renewal or extension. The application should be submitted at least 180 days before the expiration date of this permit.

F. Duty to Provide Information. The permittee shall furnish to the Executive Secretary, within a reasonable time, any information which the Executive Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Executive Secretary, upon request, copies of records required to be kept by this permit.

G. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Executive Secretary, it shall promptly submit such facts or information.

system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I. Penalties for Falsification of Reports. The Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

J. Availability of Reports. Except for data determined to be confidential by the permittee, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Executive Secretary. As required by the Act, permit applications, permits, effluent data, and ground water quality data shall not be considered confidential.

K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

L. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

M. Transfers. This permit may be automatically transferred to a new permittee if:

1. The current permittee notifies the Executive Secretary at least 30 days in advance of the proposed transfer date;

2. The notice includes a written agreement between the existing and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,

N. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, penalties established pursuant to any applicable state law or regulation under authority preserved by Section 19-5-117 of the Act.

O. Reopener Provisions. This permit may be reopened and modified pursuant to R317-6-6.6.B or R317-6-6.10.C to include the appropriate limitations and compliance schedule, if necessary, if one or more of the following events occurs:

1. If new ground water standards are adopted by the Board, the permit may be reopened and modified to extend the terms of the permit or to include pollutants covered by new standards. The permittee may apply for a variance under the conditions outlined in R317-6-6.4.D.

2. Changes have been determined in background ground water quality.

USMX GOLDSTRIKE MINE
STATEMENT OF BASIS
GROUNDWATER DISCHARGE
PERMIT NO. UGW530001
JUNE 15, 1998

1. INTRODUCTION

The Goldstrike Mine is located 35 miles northwest of St. George in Washington County, Utah. The mine is operated under, a Notice of Intent approved by the Utah Division of Oil, Gas and Mining, a Plan of Operations approved by the Bureau of Land Management, Construction and Groundwater Discharge permits approved by the Utah Division of Water Quality and various other State and County permits.

Initial construction and mine development work by Tenneco Minerals began in August of 1988 and has gone through several stages of growth and permitting. USMX, Inc. bought the operation in November of 1992 and is the parent company of the current operator, USMX of Utah, Inc. Mining of ore at Goldstrike ended in October of 1994. Since this time operations at the mine have consisted of metals recovery from the leach pads and reclamation of the mine pits and roads. Metals recovery from the leach pads is essentially complete at this time and decommissioning and closure are in progress.

2. FACILITIES DESCRIPTION

Ponds

There are six High Density Polyethylene (HDPE) lined ponds constructed at the site all of which are lined with compacted low permeability clay layer below the HDPE liner. Four ponds, the Pregnant Solution (preg), Barren Solution (barren), Recycle and Rinse Water are double lined with HDPE with a leak detection/collection sump between the layers. The remaining two ponds, the Hamburg pond and Fresh Water Pond, have a single HDPE liner with a leak detection/collection sump below the HDPE liner.

Two earthen ponds which are constructed in the backfilled East Hamburg pit are not a part of the process facilities. The two earthen ponds have a combined capacity of 7,300,000 gallons.

Leach Pads

There are two leach pads at Goldstrike. Each pad was constructed with 12 inches of low permeability clay base. Above this is 6 inches of gravel which is divided into leak detection cells that drain into a collection ditch. Above the gravel is an additional layer of low permeability clay which is covered by the HDPE liner. A two foot minimum depth of crushed drain rock base was placed on the pad prior to ore loading. The leach pads were constructed in a sloped manner so that the solution travels through the drain rock to the lower margins of the pads. Lined collection ditches were constructed along the low side of the pads through which solutions are directed to drop collection sumps. Water from the sumps flow through a pipeline to the pregnant solution pond.

Leach pad 1 has a surface area of 14.7 acres and has been loaded to a depth of approximately 100 feet. Pad 2 covers 35.8 acres and has an ore loading depth of approximately 200 feet. Leach pad 1 and 2 have a contained volume of 1,921,500 and 5,989,822 tons of ore respectively.

3. WASTE MINIMIZATION STANDARDS

Water Quality Protection Levels - Compliance with ground water protection levels shall be demonstrated by data from four compliance monitoring wells in accordance with the procedures specified in Paragraph E of the permit. If future monitoring data indicates an exceedance of protection levels, compliance status will be determined in accordance with R317-6.6.17 including if necessary reference to methods described in the EPA Interim Final Guidance Documents entitled "Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities", dated February, 1989 and the July 1992 draft addendum to the Interim Final Guidance. Subsequent updates of this document shall be utilized as available and appropriate.

Technology Performance Standard- The intent of the general standard is the prevention of the migration of wastewater at an excessive rate into the aquifer by the proper construction and operation of the facitlies. Accordingly achievement of this standard would reduce the risk of water quality standards be exceeded. Numerically this will be shown by:

a. No detection of process fluids in leak detectlion heap leach pad sumps.

b. Flow rate for leakage into ponds sumps shall not exceed 200 gallons per acre per day.

Closure Plan - The Closure Plan required to be submitted under Part I.H.1 of the permit will become incorporated by refrence upon approval by the Executive Secretary. This will describe how the current facilities are decommisioned and managed during post operational period and post closure monitoring.